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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,812	09/29/2003	Yuhji Yamashita	JP920020220US1	2216

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EXAMINER	
FEARER, MARK D	
ART UNIT	**PAPER NUMBER**
2109	

NOTIFICATION DATE	DELIVERY MODE
05/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/673,812	YAMASHITA ET AL.	
	Examiner	Art Unit	
	Mark D. Fearer	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 29, 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/24/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement submitted on 24July2006 has been considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Vilaghy et al. ("e-business Cookbook for z/OS Volume I. Technology Introduction").

Consider claims 1, 8, and 9. Vilaghy et al. clearly shows and discloses a relay processing apparatus for relaying communications between a control program that generates control commands for a terminal and a process for an HTTP server program that returns to said terminal a command constituting an HTTP response to a HTTP request received from said terminal, comprising: a terminal request processor for initiating said control program upon the reception of a function call from said HTTP

server program that initially received said HTTP request from the terminal (("Web component tier. This tier gets client requests (HTTP,HTTPS), analyses the requests and decides to respond with a file (HTML, images) or calls a program (servlet) to do some part of the server-side processing requested by the client. Generally the servlet acts as the *Controller* (controls the whole application flow), then calls a JavaServer Page (JSP) to dynamically generate the HTML response (the presentation or View) to be sent back to the client.") page 23); and a control request processor for receiving from said control program a first command generated as a response to the function call, and for transmitting to said terminal request processor a notification that said first command has been received (("WebSphere manages and runs servlets and JSPs that contain the presentation logic to format the data coming from the back-end systems. WebSphere will provide a container to run Enterprise Java Beans (EJBs). This container provides transactional and other services. The servlets or JSPs invoke the EJBs. The EJBs contain the new, transactional business logic, and the servlets/JSPs should only contain presentation logic. The EJBs can connect to back-end systems using connectors.") page 67), means in the terminal request processor responsive to the reception notification, for returning the first command to said HTTP server program, and means in the HTTP server program for returning said command to the terminal in said HTTP response issued for said HTTP request (("The response created by the servlet is passed back to the HTTP server. The HTTP server passes back the response produced by the servlet to the client. If the client is a browser, the response will contain HTML formatted data.") page 124).

Consider claims 3 and 4, and as applied to claim 1 above. Vilaghy et al. shows and discloses means responsive to a program for shifting a processor into a halted state while maintaining an execution state after a function; and means responsive to a notification from a processor for recovering from said halted state (("According to normal component-to-component communication, calls happen synchronously. This means that a component calls another component using the RMI-IIOP procedure, and during the call the client or caller waits till the server or the called party finishes.") page 138) and returning processing control and the first command to said HTTP server program (("5. The response created by the servlet is then passed back to the HTTP server.") page 124).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vilaghy et al. ("e-business Cookbook for z/OS Volume I. Technology Introduction") in view of Hoffman (US 6728769 B1).

Regarding claim 2, and as applied to claim 1 above. Vilaghy et al. shows and discloses a relay processing apparatus comprising means in the control request processor (figure 13-8, page 162) for transmitting the results from the first command to the control program, and means in the control program for performing a process corresponding to said results from the first command (("Aside from just formatting the output, servlets (read as control program) might need to talk to EJBs (read as request processor) to get data from databases or invoke transactions.") page 125). However, Vilaghy et al. fails to disclose means in the terminal for transmitting to the HTTP server program a second HTTP request that includes results from the first command. Hoffman

discloses sending a second HTTP request that includes a flag indicating that an update has been successful (("Once the appropriate data has been received by the JSP 242, the JSP 242 directs that that WEB server 204 update the server-side data base 208 according to the selected input. In response, the WEB server 204 sends an HTTP response to the applet 228 by way of the JSP 242 directing the browser 214 to update only an update icon 244 indicating that the server side data base 208 has been successfully updated. In this way, the user experiences a substantially real time interaction since the update icon immediately reflects the effects of the user supplied input data on the data base 208 without the need to refresh the entire, or even a substantial portion of the WEB page.") column 5 lines 60-67 and column 6 lines 1-4 ("... generating a second http request by the http request generator, wherein the second http request includes a database update successful flag indicating that the database has been successfully updated; sending the second http request interation applet; and updating the update icon only by the interaction applet indicating that the database has been successfully updated. ") claim 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate sending a second HTTP request indicating a successful update as taught by Hoffman with a means for sending a command and performing a process as taught by Vilaghy et al. for the purpose of application verification.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vilaghy et al. ("e-business Cookbook for z/OS Volume I. Technology Introduction") in view of Devine et al. (US 6598167 B2).

Regarding claim 5, and as applied to claim 1 above. Vilaghy et al. shows and discloses a relay processing apparatus wherein an HTTP failure response message is sent to the terminal (("The login-config element specifies the type of authentication to be used and any associated data, such as login and error pages for form-based authentication.") page 84). However, Vilaghy et al. fails to disclose a terminal request processor comprising means responsive to a non-receipt of said reception notification from said control request processor within a predetermined period of time. Devine et al. discloses monitoring heartbeats for a predetermined period of time and determining a process to be closed if the heartbeats fail to respond (("For example, a keep alive message is sent every predefined period, e.g., 1 minute from a client application to the server. When the client application fails to heartbeat consecutively for a predetermined period of time, for example, one hour, the server treats this client application as having exited by closing the application and performing cleanup routines associated with the application.") column 4 lines 1-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate monitoring heartbeats for a predetermined period of time as taught by Devine et al. with error pages as taught by Vilaghy et al. for the purpose of event notification.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vilaghy et al. ("e-business Cookbook for z/OS Volume I. Technology Introduction") in view of Perlman et al. (US 6510523 B1).

Regarding claim 6, and as applied to claim 1 above. Vilaghy et al. shows and discloses a relay processing apparatus according to claim 1. However, Vilaghy et al. fails to disclose a certification request message for requesting the preparation of an electronic certificate that authenticates a terminal in accordance with a command received from a control program. Perlman et al. discloses a system wherein certificates are requested from a device, generated, and granted. This reads on the claimed "requesting the preparation of an electronic certificate that authenticates said terminal ... in accordance with a command received from said control program ... means to transmit a signature addition command to said terminal containing an electronic signature." (("Credentials server 120 is a device (e.g., server) connected to network 150 that is capable of generating credentials (e.g., a private key and a public key certificate) trusted by one or more remote terminals. Credentials server 120 issues credentials to a user to permit privileged operations. These credentials typically include public key certificates.") column 4 lines 38-44 ("Having established a secure communications channel, the user communicates with credentials server 120 using the untrusted terminal. In one implementation, the user can request credentials, such as a private key and a public key certificate, from credentials server 120, with which the user is registered. Both the private key and the public key may be represented as an alphabetic or numeric record (e.g., a 64-bit number). Although the private key is kept

secret, the public key may be published. In another implementation, the private and public keys can be generated by the untrusted terminal. In this instance, the public key is sent to credentials server 120 so that it can generate a certificate for this key... In many public key systems, public keys are verified and access is granted based on a chain of certificates. With such systems, the credentials might include one or more certificates that complete such a chain. For instance, the credentials may include a chain of identity certificates to establish the name associated with a given public key. In addition, the credentials may include one or more delegation certificates delegating privileges associated with one key to another key. For instance, the user may sign a delegation certificate for the credentials server, which may sign a delegation certificate for the untrusted terminal. Either or both of these delegation certificates may include limited privileges. Alternatively, the credentials server might have a copy of the user's private key and use this to directly sign a delegation certificate for the untrusted terminal.") column 5 lines 55-67 and column 6 lines 1-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate generating an identity certificate as taught by Perlman et al. with a means for sending a command and performing a process as taught by Vilaghy et al. for the purpose of secure authentication.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vilaghy et al. ("e-business Cookbook for z/OS Volume I. Technology Introduction") in view of Perlman et al. (US 6510523 B1) and in further view of Kanemaki et al. (US 20020138761 A1).

Regarding claim 7, and as applied to claim 6 above. Vilaghy et al., as modified by Perlman et al., shows and discloses an apparatus of claim 6, comprising an information storage unit (("Storing your e-business files on high performance storage can alleviate I/O bottlenecks that exist on other platforms") page 47 and Figure 3-2). However, Vilaghy et al., as modified by Perlman et al., fails to disclose an apparatus of claim 6, wherein the terminal request processor further comprises means for receiving a second function call containing a certification request message and an electronic signature from said HTTP server program as a response by the terminal to said signature addition command, and means for forwarding a notification to that effect to said control request processor; means in the control request processor responsive to the notification of receipt of the second function call for transmitting said certification request message to said control program; and means in said terminal request processor for transmitting an electronic certificate received from said control program. Kanemaki et al. discloses an authentication system wherein a second transaction (function call) is made upon receiving results of signature information after first transaction (("... authentication apparatus holding information relating to a first transactor and authenticating a transaction between said first transactor and a second transactor performed via a network while communicating with another authentication apparatus holding information relating to said second transactor, comprising a transmitting and receiving means for transmitting a second request including information specifying said second transactor in response to a first request from said first transactor including information indicating said transaction content and information specifying said second transactor to said second

authentication apparatus, receiving first signature information indicating an authentication result by said second authentication apparatus in response to said second request, transmitting a third request including information relating to said transaction content included in said first request and said first signature information to an apparatus used by said second transactor, and receiving a predetermined reply from an apparatus used by said second transactor in response to the related third request, a storage means for storing a log of said transaction when receiving said predetermined reply, and a signature producing means for producing second signature information to be transmitted to the apparatus used by said first transactor via said transmitting and receiving means when receiving said predetermined reply and indicating the authentication result of the legitimacy of said transaction.") paragraph 0050).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a second certification request and an electronic signature as taught by with a means for sending a command and performing a process as taught as taught by Vilaghy, as modified by Perlman et al., for the purpose of secure authentication using digital certificates.

Conclusion

Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents

P.O. Box 1450
Alexandria, VA 22313-1450

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Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Mark Fearer whose telephone number is (571) 270-1770. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Mark Fearer
M.D.F./mdf
May 18, 2007

RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
5/22/07